

Abstract

The invention comprises a transponder moveably implanted into a pocket on an elastomeric spindle sleeve. The pocket comprises a plastic lining which is formed in the sleeve during cure or vulcanization. The transponder is inserted into the pocket once cure or vulcanization of the sleeve is complete. The open ends of the pocket are then sealed closed with an adhesive. Since the transponder is not molded into or otherwise bonded to the pocket during fabrication the transponder may move within the pocket. This minimizes stresses that may otherwise be transmitted to the transponder during flexing of the sleeve, thereby extending a transponder life. The transponder collects, stores and transmits manufacturing data which can be read by hand-held or stationary electronic devices. The transponder comprises a microchip and antenna in addition to a plastic or paper laminate upon which it is mounted. The transponder is activated by RF energy received by the antenna and therefore needs no battery.